To Dr. George W. Peavy, President,
Oregon State College.

Sir:

I have the honor of transmitting herewith the biennial report of the Federal Cooperative Extension Service, Oregon State Agricultural College, for the period July 1, 1936 to June 30, 1938, as prepared by Professor Frank L. Ballard, Vice Director of the Agricultural Extension Service.

May I invite your close inspection of this report, entitled "Cooperating for Oregon Rural Betterment." It contains many matters of interest from administrative, organization, and subject-matter standpoints. It epitomizes into terse paragraphs important work rendered by the Agricultural Extension Service to the several agricultural industries and areas in the state of Oregon.

May I ask you to forward a copy of this biennial report to the Chancellor, Oregon State System of Higher Education.

Respectfully submitted,
Wm. A Schoenfeld, Director
Agricultural Extension Service
Cooperating for Oregon
Rural Betterment

BIENNIAL REPORT
FEDERAL COOPERATIVE EXTENSION SERVICE
1936-1938

By
F. L. Ballard, Vice Director

Extension Bulletin 514
October 1938

Oregon State System of Higher Education
Federal Cooperative Extension Service
Oregon State College
Corvallis
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Twenty-fifth Anniversary of Oregon Extension Service</td>
<td>5</td>
</tr>
<tr>
<td>Beginnings of Oregon Extension Work</td>
<td>5</td>
</tr>
<tr>
<td>All Counties Contribute</td>
<td>5</td>
</tr>
<tr>
<td>Program Based on Oregon Conditions and Needs</td>
<td>6</td>
</tr>
<tr>
<td>Maladjustment Cited</td>
<td>7</td>
</tr>
<tr>
<td>Dairy Industry Meets Problem</td>
<td>8</td>
</tr>
<tr>
<td>Seed Crops Developed</td>
<td>9</td>
</tr>
<tr>
<td>Poultry Adjustment Accomplished</td>
<td>10</td>
</tr>
<tr>
<td>Continuing Problems</td>
<td>10</td>
</tr>
<tr>
<td>All Types of Service Increased</td>
<td>11</td>
</tr>
<tr>
<td>County Leaders Determine Program</td>
<td>12</td>
</tr>
<tr>
<td>Second Conference Series</td>
<td>12</td>
</tr>
<tr>
<td>Third Conference Series</td>
<td>13</td>
</tr>
<tr>
<td>Home Interests Added</td>
<td>13</td>
</tr>
<tr>
<td>Revised Programs Formulated</td>
<td>14</td>
</tr>
<tr>
<td>A Typical Five-year Program for a County</td>
<td>15</td>
</tr>
<tr>
<td>Land-use Committees in All Counties</td>
<td>16</td>
</tr>
<tr>
<td>Land-use Program in Gilliam County</td>
<td>17</td>
</tr>
<tr>
<td>Land-use Program in Coos County</td>
<td>19</td>
</tr>
<tr>
<td>Results of Twenty-five Years’ Work Summarized</td>
<td>21</td>
</tr>
<tr>
<td>Departmental Activities</td>
<td>23</td>
</tr>
<tr>
<td>Soils, Irrigation and Drainage</td>
<td>23</td>
</tr>
<tr>
<td>Crop Improvement</td>
<td>24</td>
</tr>
<tr>
<td>Horticulture</td>
<td>26</td>
</tr>
<tr>
<td>Rodent, Predatory Animal, and Insect Pest Control</td>
<td>28</td>
</tr>
<tr>
<td>Dairy Husbandry</td>
<td>29</td>
</tr>
<tr>
<td>General Livestock</td>
<td>30</td>
</tr>
<tr>
<td>Poultry Husbandry</td>
<td>32</td>
</tr>
<tr>
<td>Agricultural Engineering</td>
<td>34</td>
</tr>
<tr>
<td>Marketing</td>
<td>35</td>
</tr>
<tr>
<td>General Agricultural Economics</td>
<td>37</td>
</tr>
<tr>
<td>Rural Service</td>
<td>38</td>
</tr>
<tr>
<td>Work with Older Rural Youth</td>
<td>39</td>
</tr>
<tr>
<td>Youth Groups Aided</td>
<td>40</td>
</tr>
<tr>
<td>Youth Problems Outlined</td>
<td>41</td>
</tr>
<tr>
<td>Home Economics</td>
<td>43</td>
</tr>
<tr>
<td>All Counties Reached</td>
<td>44</td>
</tr>
<tr>
<td>Vacation Camps</td>
<td>46</td>
</tr>
<tr>
<td>Accomplishments in Clothing and Textiles Typical</td>
<td>46</td>
</tr>
<tr>
<td>Parent Education and Child Development, a New Project</td>
<td>47</td>
</tr>
<tr>
<td>4-H Clubs</td>
<td>48</td>
</tr>
<tr>
<td>Club Summer School</td>
<td>50</td>
</tr>
<tr>
<td>Supporting Organizations</td>
<td>50</td>
</tr>
<tr>
<td>Local Leaders</td>
<td>50</td>
</tr>
<tr>
<td>Moses Trophy</td>
<td>51</td>
</tr>
<tr>
<td>Summary of Cooperative Work with Federal Action Agencies</td>
<td>52</td>
</tr>
<tr>
<td>AAA Farm Program</td>
<td>52</td>
</tr>
<tr>
<td>Educational Service</td>
<td>53</td>
</tr>
<tr>
<td>Payments to Farmers Substantial</td>
<td>54</td>
</tr>
<tr>
<td>Practices Sound</td>
<td>54</td>
</tr>
<tr>
<td>Surplus Removal</td>
<td>54</td>
</tr>
<tr>
<td>Soil Conservation Service</td>
<td>54</td>
</tr>
<tr>
<td>Farm Security Administration</td>
<td>55</td>
</tr>
<tr>
<td>Farm Credit Administration</td>
<td>56</td>
</tr>
</tbody>
</table>
Cooperating for Oregon
Rural Betterment

By
F. L. BALLARD

Twenty-fifth Anniversary of Oregon
Extension Service

The year 1937 marked the twenty-fifth anniversary of organized extension work as a functional division of Oregon State College. The year 1912, when the first county agricultural agents were appointed in Oregon, has come to be regarded as the founding date of the Extension Service. On September 7, 1912, Mr. Luther J. Chapin was assigned to Marion County, and on the following day, September 8, 1912, Mr. Floyd W. Rader was assigned to Wallowa County.

In a preliminary form, the Extension Service had been established by the Board of Regents on November 8, 1911, by approval of a plan of work divided into five main divisions. These were: (1) institutes, itinerant schools, and demonstration trains; (2) correspondence courses; (3) junior and senior improvement organizations (later known as boys' and girls' club work); (4) news service and exhibits; and (5) demonstration farms. Professor Ralph D. Hetzel, now president of Pennsylvania State College, was appointed first director of the Extension Division, in September, 1911. The first annual report of the Director of Extension covers the period from November 8, 1911, to November 1, 1912.

All counties contribute

The twenty-fifth anniversary of the establishment of county extension work in Oregon saw definitely planned project work carried out in each of Oregon's 36 counties, by or under the direction of 68 extension agents. Every county in Oregon contributed financially to the support of this work. The silver anniversary year saw the period of greatest service, as measured in terms of volume of work accomplished, since 1912. As was the case in the last biennium, there has been no period when the work of the extension staff has been so greatly in de-
mand, so striking in volume, or so inclusive in its application, as during this biennium. With the final establishment of county-agent work in Harney County early in 1937, resulting from an appropriation of cooperative funds made by the County Court, for the first time in the history of the Extension Service every Oregon county was cooperating.

**Program based on Oregon conditions and needs**

All programs and procedures of the Federal Cooperative Extension Service of Oregon State College, since 1923, have been developed on the basis of the following facts:

1. The farms of Oregon furnish annually about three-fourths of the cash income of the people of the state from basic resources, and about one-fourth of the total accountable income from all sources. The 65,000 farms, moreover, furnish rental to about the same number of families and provide substantial items in the form of food and fuel to these families. In addition, the manufacturing and processing of agricultural products furnish substantial employment and add value ranging approximately from $25,000,000 to $35,000,000 annually, depending on conditions, to the cash and raw products values first presented.

2. Oregon's population can consume only a small fractional part of the production of these farms.

3. Markets must be found at distant points.

4. To increase or even maintain this return from farm land requires understanding of national and international markets, their trends, adjustments and outlook.

5. Knowledge is necessary of the competition from other states in the markets, including production and market trends, and transportation trends.

6. Production and marketing guidance is needed in adjustment to this difficult export problem.

7. Because of the handicap of distance, unusual necessity exists for the most efficient management of production and marketing practices on the individual farms, under most recently developed scientific principles.

8. Prevention of erosion and increase in fertility is always necessary to profitable production but is especially so under these marketing handicaps.
Any worthwhile improvement in social conditions, or improvement in the educational structure, is so directly intertwined with economic progress that the above-listed controlling factors are necessarily the basis of all programs leading to such objectives, wherever they may originate.

**Maladjustment cited**

An example of very costly maladjustment is the apple industry. The enthusiasm over apple orchards had quite a day in Oregon as well as in neighboring states. Oregon soils and climate produce a very fine apple but it is a long distance from market when it is produced. It is a bulky product, takes a high freight rate, and in a normal year is in competition with apples from about 40 other states. All of these states except California and Washington are nearer the domestic markets and foreign markets are fast being lost.

Various promotional groups in the period 1905 to about 1914 flooded the United States with advertising of Oregon land schemes based on apple orcharding possibilities. Beautiful Oregon landscapes found on every hand were photographed, usually when there was a cozy cottage well set in a
beautifully growing orchard. The word was that owning a small apple orchard in this matchless climate would insure comfort, even prosperity, in old age, and afford a condition certainly much to be preferred to the vagaries of uncertain climates and other less favorable conditions of life in other parts of the country.

Clerks, school teachers, and farmers, came to Oregon. Many of them took all their savings to make first payments on small tracts of land, often entirely unsuited, always at an impossible price. Of course, a great number lost their savings. Those who obtained suitable land and could finance their operations then found when they had a crop to sell, that they were two or three thousand miles, or even more, from the markets, with a bulky product, to be shipped this long distance in extreme competition. Often the situation was a tragedy; almost always it was poor business. The apple-orchard acreage has declined from 70,000 acres to approximately 20,000. If it were possible to add up the losses and to estimate the tragedies of this illy conceived use of Oregon land, staggering totals would be revealed.

**Dairy industry meets problem**

By contrast, let us consider the dairy industry. In 1920 Oregon did not produce its own requirements for butter. Study of the question indicated that certain regions of the state are particularly adapted to dairying, such as the five Coast counties and the irrigated valleys of eastern and central Oregon. Examination and study of the markets by interested leaders in the early 1920's, disclosed a substantial outlet for dairy products in California, where conditions now are and probably will continue to be such that the state's requirements for dairy products will not be met entirely from its own farms.

Acknowledging the outlet, what is it that the California market required? It was butter—not cheese, not powdered milk nor canned milk—but butter of high quality. With the natural excellence of the dairy regions in Oregon giving a good production advantage, it seems quite possible that there will continue to be an advantage to Oregon dairymen over those of any other part of the country in these neighboring California markets if the demand is met for high-quality butter.

Oregon farmers interested in dairying and the creamery-men of the state, both private and cooperative, understand the quality requirement. Of 56 random samples of the butter on
the Portland market in March and April, 1926, 69.6 per cent scored below 90 and only 5.3 per cent scored 92 to 94. In 1929 Oregon State College offered a free monthly butter-scoring and analysis service to Oregon creameries. Sixty of the 104 Oregon creameries took advantage of the service during the first year. Of commercial samples submitted by them in 1929, 20.5 per cent scored below 90 and only 7.8 per cent scored 92 to 94. Eight years later, as a result of this program, of the samples submitted by the 75 creameries participating in 1937, only 1.8 per cent scored below 90 while 61.7 per cent scored 92 to 94. The keeping quality of the butter has been materially improved and the composition has been made more uniform at a considerable saving to the industry. Incidentally, the dairy field is one in which cooperative selling effort by the producers has made them good returns and is progressing on a sound and quite satisfactory basis in Oregon.

Seed crop developed

Another sound adjustment is the development of seed crops. Starting with only a few hundred thousand dollars' value of clover and vetch seed in the early '20s, seed production now runs to four and one-half million dollars a year, and is making rapid, and apparently sound, progress. Yields of a long list of seeds produced here exceed those in any other state, and in the case of certain of them, areas in northern California and Washington are the only places other than Oregon where such seed can be produced at all.

There are interesting and significant developments in this adjustment. Farmers in Union County, for instance, working together added a sixty-five-thousand-dollar item to their annual production, from this source last year. Longer established, and in greater volume, is the alsike seed business of Crook and Deschutes counties, now bringing in more than one-half million dollars a year to farmers in the two counties. The ordinary yields in this region are almost world records.

Austrian winter pea seed, marketed in the southern states where it is used as a winter cover crop, has advanced from nothing in 1926 to 13,500,000 pounds, and hairy vetch from about 200,000 pounds in 1926, to over 7,000,000 pounds. Bent grass seed production is now 600,000 pounds annually; English rye grass about 400,000 pounds and Ladino clover about 100,000 pounds. Most of the crested wheat grass seed in the country is grown in eastern Oregon, and a substantial start
has been made in orchard grass and tall fescue as well as chewings fescue and tall meadow oat grass.

**Poultry adjustment accomplished**

Another major adjustment concerns poultry—both eggs and turkeys. As late as 1918, eggs were shipped into Oregon from Nebraska and Iowa. The three Pacific Coast states have higher production per hen than any other region in the country, due to climatic conditions and intelligent breeding practices of the poultrymen. With this advantage plus rigid grading and marketing on the basis of quality, Oregon poultrymen are now shipping 300 to 400 carloads of eggs each year to New York and Philadelphia markets, rolling them through the heavy egg-producing centers of the country. It is understanding of the need of quality, and a fine type of enterprise in developing quality, that makes possible this increase in the returns from Oregon lands.

Entering competition on the basis of high quality with other regions among which Texas is a heavy producer, about eight thousand Oregon farmers are now raising turkeys. The output in 1937 was approximately one million birds of which two-thirds go to out-of-state markets. Low production costs and high quality product give a competitive advantage which seems to be permanent.

**Continuing problems**

These are only examples. Oregon rural prosperity requires continued alertness. The dairy outlet, so well developed,

*Development of springs and water holes in the range area is effective means of improving land utilization.*
now meets complications. In 1936 Texas started to expand its butter shipments to Oregon's special market in California. The questions which Oregon farmers, assisted by the Extension Service, must consider are: (1) What is the potential competition from Texas? (2) If the outlook proves serious, how can this competition best be met? By (a) improved marketing methods, including adjustments in transportation, or (b) still further efficiency in production by continued attention to improvement of quality and lowering of production costs.

To these broader phases of the rural problem, as well as to improved farm and home technical methods, the attention of the staff of the Extension Service is directed.

**All types of service increased**

During the biennium, county agricultural agents and assistants held meetings and tours in 36 counties, which were attended by 333,764 persons. Attendance at similar meetings during the previous biennium was 307,531 persons. There were 345,491 office calls by farm people for definite official purposes, during the biennium, which was an increase of 9 per cent. In addition, the agents wrote 212,419 letters in the two-year period, as compared with 199,005 in the previous biennium.

A similar increase in activity was shown by the 11 home demonstration agents who held 8,107 meetings, attended by 245,540 persons, as compared with 6,220 meetings, attended by 165,084 persons in the previous biennium. These home demonstration agents cared for 8,326 office callers and wrote 12,572
official letters. 4-H Club work continued to advance, with a total enrollment of 42,950 girls and boys in 4,390 clubs, during the biennium.

**County leaders determine program**

In the counties, every Extension agent works on a program which is to a great degree determined by the leading farmers within the county, the nature of the work, of course, being that contemplated by the originating legislation. The extension agents, who deal most directly with technical farm problems, are working on long-time programs determined mainly as a result of formal conferences with leaders in all phases of agriculture within the counties. These conferences, generally referred to as county economic outlook conferences, were first held throughout the state by the Extension Service in the period between 1924 and 1927. This method, originating in Oregon at that time, has been taken up by the United States Department of Agriculture and advocated for use in other states. Revisions are made annually to meet changing conditions. The work with women is likewise to a great degree determined within the county by local home extension committees. 4-H Club work is carried on in close cooperation with school officials and local leaders and is articulated closely with the senior problems.

**Second conference series**

After approximately ten years’ work under the county programs developed in the first series of economic conferences it was decided to hold another series in order to check on progress and developments. A series of meetings was held in 1936. In each county a number of commodity committees were appointed, made up largely of growers, with the county agent serving as secretary. The organization, preparation for and conduct of these county conferences was a large task that included the conducting of more than 700 committee meetings and the attendant work with them. As a result, in each of the counties there is now a long-time Extension program worked out by large numbers of successful and practical producers with the assistance and counsel of the Extension specialists. Coupled with the program of the Eastern Oregon Wheat League, representing the Columbia Basin wheat counties, these programs form a substantial part of a long-time agricultural program for the state.
Third conference series

In the fall of 1937, because of special problems in connection with the Farm Act, definite plans were made to recanvass thoroughly the entire matter of county extension programs in every county, and to consider land-use questions as affected by the AAA programs, Taylor Act developments, Soil Conservation Service programs, and activities of other State and Federal agencies.

Four committees were organized in each county; one a Land Use committee; second, a Plant Industries committee; third, an Animal Industries committee; and fourth, a Home and Rural Life Interests committee.

The following is a statement made to staff members, outlining the scope of these meetings.

"The Livestock and Farm Crops committees will be concerned quite largely with outlining a program of agricultural production and marketing, using the recommendations made by similar committees in past years as a basis. Such program-planning meetings were first held by farmers in Oregon some ten or twelve years ago, and another series followed two years ago. New factors have changed the marketing outlook recently, however, and there is need generally for review of these conditions with the general public, and for restatements of policy.

"The question of land use has also assumed vital importance in the past two years. Practically every Federal agency having to do with agricultural or land problems is presenting some program involving land utilization. If the farmers of Oregon are to meet these Federal agencies with authentic information as to local conditions, in order to bring about cooperation, or as is the need at times, protection from rulings made without full knowledge of the facts, it is essential that there be thorough consideration and crystallization of opinion as to these local situations."

Home interests added

The importance of those activities concerned with home and rural life was emphasized in the following statement to extension-staff members:

"The men and women on the Home and Rural Life committee are making a study to determine a public program to improve home life in the rural regions. The Josephine County committee, meeting recently, for instance, considered figures from a home survey made two or three years ago in the county,
and brought out that in 257 of about 750 farm homes, water was still carried an average distance of 160 feet, and that only 19 per cent of the homes had both hot and cold water piped into the house. Fifty-eight per cent were without kitchen sink and drain, necessitating carrying water out as well as in. Therefore, this committee believes desirable, and will recommend as a point in public policy in Josephine County, the improvement of the water supply in the farm homes of the county. The committee points out also that the homemaker's workshop needs remodeling. The survey showed $250 per home would bring untold benefits in the way of additional conveniences. Approximately 75 per cent of the homes included in the survey expressed need for more closet space, about 70 per cent for bathrooms; most, however, needed additional bedrooms as well as additional storage space for fresh fruits and vegetables, and 40 per cent needed additional work room."

Revised programs formulated

These conferences were held during the early part of 1938. They were participated in by approximately 5,000 farm and home leaders, and recommendations were the result of careful deliberation and analysis of facts relating to the agricultural and rural life problems of each county. The recommendations of these conferences, resulting from the deliberation of farm leaders in the various counties of the state, are forming the basis for revised state and county programs of extension work.
At this time, because of these conferences, the Extension Service program as a whole is undergoing some revision. The extension agents of every county were brought in, each on a particular day, to the State College, to consider with specialists on the campus, certain phases of the work in the counties. Four or five major problems in each county were determined as major objectives for the next five-year period.

A typical five-year program for a county

A typical example is Columbia County, in which it was decided to give emphasis to the following work during this period. The first three items will be led cooperatively by the county agricultural agent and the home demonstration agent; the last four are under direction of the county agricultural agent.

1. Develop water supplies and sanitary facilities in farm homes.
2. Maintain at least 500 boys and girls in 4-H club work each year.
3. Develop wider utilization of home gardens to aid in support of families on the many subsistence farms of the county.
4. Develop profitable uses for the thousands of acres of cut-over land. (Such use has already been developed this year to the point where 11,000 Eastern Oregon sheep are being pastured during the summer season.)

An excellent stand of grass following seeding by plane. August 1937.
5. Develop supplemental irrigation by using creek and river water, now running into the Columbia River, for supplemental irrigation on individual farm units.

6. Improve dairy industry by attention to breeding for production, maintenance of cow-testing associations, and cooperation with cooperative dairy marketing associations now in the field.

7. Improve soil fertility by establishing liquid-manure tanks on dairy farms.

Other important and seasonal work will, of course, be followed as heretofore, but the emphasis of the local extension county agents and of the central extension staff will be given to the accomplishment of measurable results on the above-listed special projects which have had the approval in the economic-outlook conference of the farm men and women of the county.

Land-use committees in all counties

Because of much activity in various aspects of the general revision of land use on the part of many United States Department of Agriculture agencies that operate in the state, many of which have only nominal connection with the State College divisions, it seemed advisable to continue in active status the land-use committees of each of these county conferences.

Plans are now under way to assist these land-use committees in determining a policy for the state in connection with such questions as utilization of cut-over land on the Coast, which involves classification as between grazing and other agricultural possibilities and forestry uses; the more effective utilization of large expanses of certain hill lands in the Willamette Valley; the question of wheat production versus other uses of large areas of low-producing lands in Eastern Oregon; and certain range adjustments.

Land-use programs in Gilliam and Coos counties

The following extracts from conference reports of Gilliam and Coos counties point to some of these questions and show the manner in which they were analyzed by committees of representative farmers. Similar fundamental analyses were made in all of the 36 counties of the state.
"The committee recommends some rather drastic changes in the utilization of present cultivated land of the county. The major change recommended is that approximately 24 per cent or 61,000 acres now cultivated should be seeded to perennial grass. This does not mean that the committee believes that 24 per cent of every farm should be taken out of cultivation or that this change should take place within the next one or two years. The committee believes that there are areas in the county covering whole farms which should be seeded to perennial grass, but at the same time knows that there are other areas where only a very limited acreage should be taken out of cultivation.

"The committee does believe, however, that land in the following classifications should be permanently seeded to grass:

1. Land on which the average return from wheat is less than the cost of production because of location, difficulty of cultivation, or low yields.

2. Land on which wind erosion cannot be controlled if cultivation is practiced. These areas are ordinarily small, sandy places which menace a larger area if they do blow.

3. Land which is so steep that the top soil is already gone or which is rapidly losing top soil from erosion.

4. Land infested with morning-glory or other perennial weeds where the affected area is so large that chemical or clean-cultivation methods of eradication are not feasible.

5. Land which is now seeded to rye or wheat for pasture. The committee believes that crested wheat grass will produce at least as much pasture as annual grains and will eliminate the necessity of expensive plowing and seeding.

"The committee estimated that about half of the present cultivated area which should be seeded to grass, or 30,000 acres, would fall in one of the above classifications and should be seeded to grass permanently, never to be plowed again unless reseeding is necessary.

"The remainder of the grass seeding on cultivated land, or 31,000 acres, should be on the basis of a long-time rotation. This would mean that the land should be seeded to grass for a period of five or six years and then plowed up and used for wheat production for a few years. When the original area of rotation grass
was plowed, then another similar area should be seeded to grass. This would permit on most farms a grass, wheat, and summer-fallow rotation over all but the best of the land during a period of twenty years. These rotation grass seedings will prevent erosion and build up the organic-matter content of the soil so that moisture absorption will be greatly increased and erosion lessened even after the grass is plowed up and the land seeded to wheat again. This practice should increase wheat yields per acre on the land in the rotation and help to maintain a permanent and prosperous agriculture over a much longer period."

"In Eightmile Canyon in the northern half of Twp. 1 N. R. 22 E. W. M., and the southern half of Twp. 2 N. R. 22 E. W. M., is an area of approximately 4,000 acres, almost entirely grazing land, which the committee believes should be withdrawn from agricultural uses at least for a period from 5 to 10 years. This area lies due west of about 10,000 acres of wheat land. The section of Eightmile Canyon indicated has been almost entirely denuded of vegetation by summer grazing and for the past four or five years has been blowing seriously. Wind blows have started up side canyons in eight different places adjacent to wheat land and in two such places have already reached the cultivated land with devastating effect. Wind erosion on the cultivated land cannot be controlled so long as blowing sand is continually deposited on it from Eightmile Canyon. When sand blows from the eight side canyons have all reached the cultivated land they will spread out in a fan shape and virtually ruin most of the 10,000 acres of cultivated land. So long as grazing goes on in this portion of Eightmile Canyon there is no likelihood of sufficient vegetation growing on the land to prevent soil blowing out of the canyon. The land in the canyon has already been damaged by erosion to the point where it has little value for grazing or any other purposes, but so long as it is privately owned it will probably be grazed enough to prevent vegetation from starting again.

"The committee therefore makes the following definite recommendations regarding this area:

"1. That it be purchased by some public agency, preferably the county, State, or Federal government, and withdrawn from agricultural use.

"2. That the Soil Conservation Service with CCC labor which they have available reseed to grass or other vegetation all of the area where this is practicable and that windbreaks or other means be used immediately to stop the sand blows from going up the side canyons on to the cultivated land.
"3. That this area be made a portion of the Taylor Grazing District No. 7, and be administered under the Taylor Grazing Act. This administration would then have authority to permit controlled grazing if and when the area is again deemed safe for agricultural uses."

In Coos County the questions are entirely different, but the same careful consideration was given on the part of farmers, and in that county the following recommendations regarding land use were agreed to by a committee which considered the matter in several sessions. This analysis was presented to a large meeting of Coos County farm men and women and was approved by them. The conclusions were:

"In arriving at the recommendations which are made in this report, 1935 census figures have been taken as a base for the present use of land. An attempt has been made to arrive at a sound land-use policy by answering this question: 'What is the estimated acreage that will be devoted to the production of various farm products in the county after all land not adapted to agriculture has been shifted to other uses and after sufficient time has elapsed to permit such changes in farm-management practices as are necessary to maintain soil fertility and control erosion, and to permit those shifts between agricultural enterprises which seem clearly desirable and susceptible of practical accomplishment?'

"This question aims essentially at the development of a long time land use program for the county. In order to bring about this condition of balanced land use the committee recommends:

"1. That 300 new farms should be developed in the county as a result of clearing 9,800 acres of land, of subdivisions which can be expected to take place on some of the larger tracts of agricultural land, and by the development of 150,000 acres of additional range land. This range land would come largely from woodland pasture and woods now in farms and including 61,600 acres of land not now in farms but which are susceptible to that development because of their locations. Some of this might be government land which lies within areas classified for grazing purposes.

"2. That 200 farms, representing a total of 16,000 acres, located for the most part at the heads of streams chiefly in the eastern half of the county, be diverted from
farm land to other uses such as timber production. It is felt that these lands are not suitable for agriculture and are not capable in ranch units of providing a reasonable standard of living for a farm family. It is felt too that public expense in maintaining schools, roads, and other improvements in these outlying districts may be reduced by diverting this land to other uses.

"3. That 5,300 acres of bench and hill land be diverted from the production of grain hay to perennial grasses and clovers to check losses by erosion, maintain soil fertility, and provide a more profitable system of farming on these lands.

"How will Coos County look if these recommendations can be carried out? The farm population in the county would be increased by approximately 400 people and there would be 100 more farms than we have today. The amount of tillable land on farms would be increased by 9,800 acres or almost one-fourth. A shift from the production of grain hay to the production of perennial grass and legumes would be noted on 5,300 acres of bench and hill land. The amount of noncrop pasture land would be increased from 146,000 to 251,000 acres by an addition of 61,600 acres of land not now in farms and by developing 100,000 acres of woodland pasture and woodlands now in farms. Included in this shift in land use will be 9,800 acres which will be cleared and made tillable; approximately one-third of this to be on bottom land, and two-thirds on bench or hill land. These land-use shifts would make it possible to add 4,000 dairy cattle and 80,000 sheep to the
farms of Coos County which should increase our agricultural income by nearly one million dollars annually.

"The diversion of woodland pasture and woodlands in farms, also the nonfarm cut-over land from the idle class to the production of grass for range purposes is recommended to provide profitable use for this large block of land. This adjustment should increase the agricultural income, widen the tax base, and provide a satisfactory living for additional farm families. These same principles will apply to the clearing of 9,800 acres of land suitable for crop purposes of which two-thirds is upland and one-third bottom. In addition, the upland clearing will provide an opportunity for livestock operators to grow more hay and reduce their cash outlay for imported feed while the lower land cleared will provide most of the feed for the increased number of dairy cattle."

Results of twenty-five years' work summarized

After twenty-five years, the greater accomplishments of extension teaching may be listed as follows:

1. Substantial aid in development of leadership in rural affairs among both men and women.
2. Establishment of the School of Agriculture in particular, and to some degree the entire State College, in the consciousness of the people, as a potent force in the industrial, technical, economic, and social progress of Oregon.

From this single sweet clover plant, the lone survivor of a wilt attack in 1921, has been developed the present wilt-resistant strain, first to grow successfully in Western Oregon.
3. Adoption of economic and social analysis, as fundamental procedure, by rural leaders of the state in the field of agriculture, and in fact, in all the broader phases of rural life.

4. Firm establishment, in the educational fabric of the state, of 4-H Club programs and junior extension.

5. The acceptance of home economics extension work as a means of improving the standards of the home and rural life.

In the narrower or subject-matter field, the following are perhaps accomplishments of the broadest scope:

1. Improving wheat varieties on practically all acreage of the state. Wheat accounts for approximately 15 per cent of the state’s annual income from agriculture.

2. Assisting to establish the dairy industry on a satisfactory basis through obtaining adoption of practices leading to higher quality and economical production. Dairy products bring in about 18 per cent of the annual agricultural income.

3. Adoption of use of sulphur as a fertilizer on alfalfa on 100,000 acres.

4. Assisting to establish the poultry and turkey industry on sound commercial basis.

5. Establishment of alfalfa on 50,000 of the 100,000 acres to which it is adapted in the Willamette Valley.

6. Assisting to establish use of water resources for supplementary irrigation in Western Oregon.

7. Promoting wider understanding of possibilities of cooperative marketing associations in organization and member-relationship problems, and establishment of many such associations.

8. An increase of 25 per cent in the annual production of top-grade lambs in the farm flock areas.

Marked achievements have occurred of major importance to specific counties. Space does not permit an enumeration in this field of achievement. Examples, however, are:

1. The establishment of a 5,000- to 7,000-car potato industry in Klamath County.

2. Establishment of a very successful organization for cooperative marketing of livestock in Union and Wallowa.

3. The cherry pollenization work, and later, little-leaf control through chemical application in Wasco.
4. The dairy-herd improvement program in Tillamook.
5. Clover-seed production in Crook and Deschutes.
7. Seed production and marketing in Union.
8. Livestock disease control in Grant.
9. Wheat-variety standardization and reduction in smut infection in the Columbia Basin.
10. Reduction of wheat acreage in the Willamette Valley.

Departmental Activities

In THE departmental reports that follow, no attempt has been made to give a complete picture of all of the activities conducted under the various projects of the Extension Service. Only a few representative accomplishments are recorded as indicative of results achieved during the biennium.

SOILS, IRRIGATION AND DRAINAGE

Soil management

In the field of soils, more definite progress was made in bringing about acceptance of sound soil management practices during the past year than in any since the establishment of the Extension Service. This was due to the very general participation of Oregon farmers in the AAA programs, coupled with the fact that the practices under which benefit payments were made available, were practices long recommended by the Agricultural Experiment Station and the Extension Service. The use of trashy summer fallow as a method of preventing wind and water erosion on Eastern Oregon wheat lands was one of the outstanding developments of the year. This new practice was followed on 114,000 acres in 1936, and on 240,000 acres in 1937.

Soil resources conferences

Two-day county soil resources conferences, for the purpose of evaluating soils resources, consideration of ways and means of fertility maintenance, and prevention of soil losses, were held in 18 counties during the last half of the biennium, attended by 2,281 interested producers. There is evidence of great benefit having come from these conferences in increased adoption of measures that tend to maintain fertility and prevent erosion.
Ground limestone popular

In establishing stands of legumes on acid soils, more ground limestone was used than ever before in the history of the state—1,608 tons in 1936 and 16,955 tons in 1937. This increase was due to confidence established in the use of lime through demonstrations arranged by county agents, and through payments available through the Agricultural Conservation Program, which enabled growers to receive approximately 50 per cent of the cost.

Irrigation

Supplemental irrigation in Western Oregon, which has long been a part of the soils project, was again a major activity during the biennium. Under specific direction of the Extension Service, 9,133 additional acres were brought under supplemental irrigation. This brings the total irrigation development in Western Oregon, started and guided by the Extension Service, to approximately 20,000 acres. This acreage, devoted to various crops, is utilized by the Extension Service staff members as a demonstration to show what may be done under varying conditions with irrigation in Western Oregon.

CROP IMPROVEMENT

Forage crops

To provide more adequate feed supply for the livestock population, the following progress was made during this biennium:
(1) Increased the acreage in Eastern Oregon of crested wheat grass introduced by the Extension Service, from 2,441 acres in 1935 to 51,395 acres in 1937, with prospects of continued increase in 1938. (2) To determine improved forage grasses and legumes, grass nurseries containing from 20 to 60 varieties have been maintained where possible since 1930. In 1936, 120 nurseries were established. This was increased to 136 in 1937. (3) Continued expansion of Ladino clover in 32 counties was emphasized bringing it to 17,776 acres as compared with 134 acres in 1926, adding approximately $177,760 to the pasture value compared to same land in other forage crops.

Alfalfa

Grimm alfalfa in Western Oregon was brought to a peak acreage of 53,131 acres in 1937, as compared with 3,310 acres in 1926. Ladak alfalfa, introduced on farms of the state by the Extension Service, found increased value under conditions of limited water supply and severe winter temperatures, with 6,710 acres in 1937, compared with a few small demonstration plots in 1929.
Range-land improvement effective

Pasture range improvement has played an important part in this program. In Gilliam County, for example, crested-wheatgrass acreage has been increased during the past four years from less than 100 acres to more than 13,450 acres. About the same increase was also made in Morrow County. Deferred grazing demonstrations have been established in cooperation with 14 different stockmen. Twenty-one miles of fence have been built under direction of stockmen to improve range management. One hundred and fifteen springs were developed and reservoirs constructed, thus assisting to prevent overgrazing. In Western Oregon, range improvement involved seeding of thousands of acres of burned-over land to desirable grass mixtures. Cooperating with local farmers, the Extension Service organized a project in Coos County resulting in the seeding of 12,932 acres by airplane and an additional seeding of approximately 12,000 acres by hand.

Small seed

More different kinds of small seeds, grasses, alfalfa, clover, vetch, and winter peas, and in larger volume, were marketed by Oregon farmers during the biennium than ever before. The income from the small-seed industry reached a total of $4,500,000 in 1937, the result of a project which the county extension staff has been advancing for more than ten years. This has been brought about through field demonstrations, tours, publicity, certification service, and aiding marketing activities.

Weed control

Special attention during the biennium was given to organizing an attack upon the weed problem. Attention was concentrated on a few of the most distinctive perennials, including Canada thistle, morning-glory, white top, quackgrass, and Russian knapweed.

These weeds levy a toll against the agriculture of the state, variously estimated at from $1,500,000 to $2,000,000 annually. Public sentiment has been crystallized through educational activity of the extension staff, with the support of organized agricultural groups, including the Grange, Farmers' Union, Eastern Oregon Wheat League, and county economic-outlook conferences. Through this support more was accomplished on weed control during the biennium than ever before.
HORTICULTURE

State-wide service

Horticultural work in Oregon includes demonstrations of improved pruning methods, orchard-soil management, insect-pest control, plant-disease control, planting-stock improvement, and demonstrations in preparation and use of spray materials. Activity in the horticultural field is carried on in every county, varying in extent with the importance of the industry. In Jackson County, where horticultural products provide a substantial proportion of the income, an assistant county agent devotes his entire time to horticultural work. In the range-livestock sections, like Grant County, the extent of horticultural work is limited to advice in the control of garden pests and diseases, and management of the family orchard.

Cultural practices

Regular planting of orchard cover crops, an early recommendation of extension workers, is a major soil-management practice on approximately 200,000 acres of horticultural lands in the state. Special attention was paid to the sowing of cover crops because the Agricultural Conservation Program encouraged this practice with a $2.00 per-acre payment. In all horticultural counties, circular letters were issued, carrying timely information on the importance of cover crops, and information on time, kind, and rate of seeding.

A group of walnut growers watching a demonstration of treating freeze-damaged crotches of English walnut trees.
Pest control

Included in the horticultural project is insect-pest control on horticultural crops. A typical example is found in the control of pea weevil, which threatened 20,000 acres of peas grown for canning purposes in Umatilla County, and which involved growers as well as substantial canning interests. Serious damage from the infestation seemed assured when it was seen during the growing season that the pea weevil was present and a major portion of the crop might be infested. The county agent called in entomologists of the Oregon Agricultural Experiment Station and a representative of the Agricultural Engineering Department. Research work had already pointed the way to effective control methods through the use of rotenone dust. Growers were brought together, an extensive campaign was launched, and a special type of duster was developed that could be used even on the most windy days. The result was that loss due to pea-weevil damage was negligible and a promising new industry was saved.

Through the strawberry-producing area in Western Oregon, demonstrations in methods of controlling spittle bugs in strawberries were carried on. The result of this spittle-bug control campaign added thousands of dollars to grower incomes during 1937 when strawberries brought nine cents a pound.

Other important pests or diseases on which staff members issued information on control measures included cherry fruit fly, codling moth, spider mite, thrip, syneta beetle, strawberry mite, strawberry root weevil, and peach and prune root borer.

The rapidly increasing pea canning and freezing industry in the Northwest has apparently been saved through successful large-scale dusting with rotenone to control pea weevils, using methods and machines developed by state and Federal specialists at Oregon State College.
RODENT, PREDATORY ANIMAL, AND INSECT PEST CONTROL

The object of extension activity in the control of rodents, predatory animals, and other pests is the prevention of crop and animal losses. Cooperating with the Bureau of Biological Survey, under terms of a biennial appropriation from the State Legislature, rodent-control work was carried on by county agents in every county. Involved were such pests as ground squirrels, gophers, moles, field mice, kangaroo rats, and jack rabbits. In cooperation with the hunters of the Biological Survey, county agents cooperated in coyote and bobcat control work on the basis of special appropriations by county courts in seven counties.

Ground-squirrel control

County agents in all 36 counties of the state during the biennium mixed and distributed to farmers at cost 246,313 pounds of poison bait for ground squirrels, resulting in savings in crop damage of more than $600,000. In addition, in 17 counties, county agents cooperated with the Biological Survey, Forest Service, and Resettlement Administration in projects that resulted in the treating of 1,536,783 acres with poison bait for ground squirrels during the biennium.

Gopher control

By arranging and conducting gopher-poisoning demonstrations, mixing and distributing of bait materials, and organizing district-wide poisoning campaigns, county agents in 26 counties reduced substantially the crop damage from gophers.

Field mice and kangaroo rats

Poison bait for field mice and kangaroo rats was mixed and distributed at cost to farmers in Clatsop, Crook, Grant, Hood River, Jefferson, Klamath, Lake, Morrow, Washington, and Yamhill counties, resulting in the treatment of more than 30,000 acres during the biennium.

Jack-rabbit control

During the biennium, jack rabbits were practically exterminated in Malheur County. More than 150,000 jack rabbits were poisoned under the direction of the county agent in cooperation with the CCC and the Federal Biological Survey. In seven other counties farmers were assisted in poisoning the pest.
Mole control

Throughout Western Oregon, where moles are a serious problem, county agents in the course of regular farm visits give numerous mole-trapping demonstrations. Frequently field demonstration meetings are also conducted to show proper method of trapping. Such meetings were held in 11 counties during the biennium.

Mormon-cricket control

Because of extensive Mormon-cricket outbreaks in Baker and Wallowa counties, control campaigns were organized and effectively pursued. In Baker County 4,300 acres were dusted with sodium arsenite bait, which protected 35,000 acres of irrigated cropland from a $75,000 estimated damage, and resulted in holding the crop loss to approximately $2,750. The program was equally successful in Wallowa County, where practically all crop loss was prevented. The project was conducted with WPA labor under the organization and supervision of the county agents.

Grasshopper control

As a result of organized grasshopper-control work in past years, relatively little work was necessary during the biennium. Grasshopper-poison work was reported by county agents in eight counties. Poisoning operations were of a localized character, with no extensive campaign. Grasshopper egg-bed surveys were made during the fall of 1937 in counties with light infestations, in preparation for the next year.

DAIRY HUSBANDRY

The dairy industry accounts for approximately 18 per cent of the annual income from the farms of Oregon. The industry is on a relatively sound economic basis in many parts of the state. Production costs are comparatively low on the irrigated lands of Eastern Oregon and only slightly higher in the Coast counties, where grass is the major crop.

Butter production

California is a butter deficiency market and gives promise of a long-time outlet for Oregon butter. Analysis of this market some years ago indicated the unsoundness of increased production of cheese or dairy products other than butter for this particular outlet. One extension specialist develops the production phases of the dairy program. For the dairy-manufacturing pro-
gram, the assistance of Dr. G. H. Wilster, in charge of dairy-manufacturing research, is obtained from time to time.

Bang’s disease

The Extension Service early offered cooperation with the Bureau of Animal Industry in the carrying out of its program to eradicate Bang’s disease. Although there are many complex features involved in this cooperative arrangement, it has continued through the past biennium, and the result is that Oregon is second on the list of states in the percentage of breeding cattle under official supervision for Bang’s disease and third on the list of total number of such cattle tested under this program since its organization in July, 1934, and third also in percentage of dairy cattle tested.

In connection with this program, one series of 25 meetings to consider questions relating to the Bang’s disease program was held in cooperation with the Bureau of Animal Industry and the State Department of Agriculture.

Herd improvement

Dairy-herd improvement associations continued to attract more interest. Seventeen associations were in operation at the conclusion of this reporting period, with several more in the process of organization. These associations are handled under the general direction of the extension specialist in dairying.

Surplus stock

In recent years the sale of surplus dairy stock to California dairymen has been an active phase of the dairy business, and still is, but such sales declined during the year, largely because of the fact that improved local conditions caused dairymen to be less ready to sell surplus stock and also because there was a considerable local demand for cattle to replace those eliminated as a result of Bang’s disease tests.

Progress was again made in programs in quality improvement, improved breeding, and general feeding and management plans.

GENERAL LIVESTOCK

Livestock feeding

Continued attention during the biennium was given to the possibility of increasing income from Oregon livestock over a period of time, through development of feeding, particularly
lambs. With feed resources easily available in greatly increased quantities, there is growing appreciation of the possibilities in the sale of a greater number of finished livestock. Plans were developed in 1936 for meetings to consider the economic possibilities and specific techniques of feeding in various districts of the state, and 18 meetings were held during 1937, attended by 1,055 interested stockmen.

Lamb shows

In Western Oregon only about half of the lambs, sold from approximately 700,000 sheep in farm flocks, are in satisfactory condition at marketing time. Thus, obviously one-half of the lambs bring a lower price than should be the case. As a basis of this educational program, during the biennium 12 lamb shows were organized in 7 counties, with a total attendance of 5,150. At these lamb shows, most grades of live lambs, and carcasses as well, were entered in local competition.

Bang’s disease

County agents cooperated with the Bureau of Animal Industry in testing beef cattle for Bang’s disease. Tests of beef cattle are being made as thoroughly as is the case of dairy cattle in the dairy counties. During the biennium a total of 159,760 cattle were tested, in 2,955 herds, in 10 counties.

Range improvement

More effective management of range lands was emphasized in every range county. Range-improvement work was greatly aided by the Agricultural Conservation Program, which resulted in the development of watering places, construction of cross fences, rotation of grazing, and the seeding of improved grasses. The importance of improved range and pasture practices, where economically sound, is brought out by the fact that of the 61,188,481 acres in Oregon, only 8.2 per cent is arable and 41.7 per cent pasture and range land, and under private ownership; 48.8 per cent is forest land, largely used for summer grazing of cattle and sheep.

Liver-fluke control

The Federal government financed a project for controlling liver fluke on some of the badly infested ranges in Oregon, under the supervision of Dr. Robert Jay, of the United States Department of Agriculture, who called upon the Extension Service for aid in organizing and carrying on the work. The control measures
were set up under a WPA project and included the draining of land as well as the purchase and distribution of bluestone for the destruction of the snail that harbors the fluke. In Coos County approximately 62,000 feet of ditch were dug on about 12 different farms for the purpose of draining land. This drainage destroys the moisture conditions that favor the growth of the snail. In 1936, 15,706 acres were drained on 126 farms in 6 counties, and in cooperation with the WPA 13,150 pounds of bluestone were distributed in 2 counties.

State legislature aids disease-control program

The 1937 session of the Oregon State Legislature appropriated a sum of $15,000 for the biennium to be used by the Veterinary Medicine Department of Oregon State College in investigating range livestock diseases. The extension agents are cooperating closely with the department in getting information to them as rapidly as possible concerning losses from these unknown diseases. The veterinarians are equipped with a traveling laboratory which is rushed immediately to an area where losses occur, so that a close study can be made of the problem. Some excellent progress has been made during the year in arriving at the causes for some of these heretofore unknown diseases.

POULTRY HUSBANDRY

Scope of industry

Eighty per cent of Oregon farms produce poultry products. Of this number, 8,000 farms now produce turkeys for market. Until as late as 1918 Oregon imported eggs from time to time.

Native Oregon bunch grass rehabilitated through protection against overgrazing.
Now several hundred carloads are exported annually, as production has far exceeded the requirements of the population of the state. The whole problem in poultry extension revolves around the production of a quality product that will meet favor in distant markets, meeting there the competition afforded by other areas.

Production adjustment

The Extension Service program in poultry husbandry is based on careful analysis of the economic factors contributing to its background, and includes the discouraging of surplus production at points lacking in marketing facilities and the advocacy of the maintenance of large flocks in other communities with adequate market outlets. In other ways the program takes broad positions in influencing poultry production as a commercial enterprise. Included in this program is advocacy of side-line flocks of not less than 400 hens on farms where eggs are considered a commercial enterprise, and establishment of flocks of not less than 1,500 hens when the major farm income is from poultry.

Accomplishments

The main accomplishments during this biennium in the poultry project may be listed as: (1) continued assistance to the marketing associations; (2) advancement of the national poultry improvement plan in record-of-performance work; (3) progress in coccidiosis eradication; (4) distribution of more than 825,000 doses of pox virus; (5) development of floor-heating methods for brooders in cooperation with the Department of Agricultural

In adjustment programs developed by farm leaders and the Extension Service increased livestock production in Oregon seems to be one of the soundest trends.
Engineering; (6) dissemination of valuable unpublished data on turkey production; (7) construction of egg-storage rooms on commercial poultry farms, and (8) organization of all branches of the poultry industry in the new Oregon Poultry Council.

AGRICULTURAL ENGINEERING

Water systems

Service work and demonstrations in connection with the installation of farm domestic water-supply systems, sanitation and sewage-disposal systems, rural electrification, and distribution of farm building plans are the principal activities in the field of agricultural engineering.

For example, during the biennium, county agents assisted farmers by surveying and planning domestic water-supply systems in 12 counties. The most extensive of these was a community project in the Clatskanie district of Columbia County, planned to serve 16 different farm homes. In Grant County a farm-home water-supply demonstration meeting was held, attended by 49 persons.

In Jackson County 11 meetings on water supply and sewage disposal, attended by 189 persons, were arranged and conducted jointly by the county agent, home demonstration agent, and extension specialists in agricultural engineering, which resulted in greatly stimulated interest in home water systems and increased sanitation. As a result, 15 farmers have announced plans to install water systems and 23 plan new septic tanks.

Specific requests for assistance and information dealing with sanitation, principally sewage-disposal systems and plans for septic-tank construction, were answered by 18 county agents; 113 such requests were recorded.

Rural electrification

In six counties, county agents were active in cooperation with local committees of farmers in extending the use of electricity into rural communities. Most extensive activity was in Umatilla County, where, as a result of work done during the first half of the biennium, the Umatilla Electric Cooperative, with 333 members, is now formed. The Rural Electrification Administration has allocated $129,000 to this association, which will bring electrical service to 492 farms in western Umatilla County. The assistant county agent was active in the preparation of the application, in the organization of the association, and in conducting a survey to determine power requirements.
Farm buildings

In all counties, the county agents distributed farm-building plans on request. The plan service has been improved during the year by issuance of a 22-page mimeographed handbook containing various recommended farm plans. Blueprints of the various plans in this book are obtainable at a small fee. The handbook is available in each county agent’s office, where it is frequently studied by farmers.

MARKETING

Ever since the organization of the Extension Service in 1912, it has been the declared policy of Oregon State College to give every possible assistance through the facilities at its command toward the satisfactory solution of the farmer’s marketing problems. This policy has been consistently observed at all times, and there has been complete concert of action throughout the institution in its fulfillment.

Continued assistance has been given through a specialist in cooperative marketing to the large list of cooperative marketing associations now functioning in the state. Through the years, connections have been close. Some of these organizations, such as the Pacific Wool Growers Association, Oregon Turkey Cooperatives, and Interstate Associated Creameries, may be said to have had foundations laid by the Extension Service.

Assistance in organization and in management problems since has been rendered the Pacific Cooperative Poultry Producers, Lower Columbia Dairy Association, North Pacific Prune Exchange, Eugene Public Market, and more than a hundred smaller organizations.

Summary of marketing work

Every Oregon county agent directly or indirectly carries on activity in the marketing field. In many counties marketing has assumed an aspect of major importance. This activity in many instances has resulted in marketing agricultural produce to advantage, and assisting to organize producer owned and controlled associations that are performing important marketing services in the state. Assistance is given established cooperative marketing associations as well as in organizing sound new ones. Individual farmers are assisted with their marketing problems, as well as groups producing the same commodity in obtaining market outlets. To facilitate marketing, emphasis is placed on proper standardization and grading in cooperation with the State Department of Agriculture.
Livestock marketing

An efficient livestock market service is being rendered to stock growers. Orderly marketing has been made possible through the operation of livestock shipping associations in the counties of Wallowa, Union, and Baker. This extensive development, still serviced by the county agents in these counties, started in 1928 with a trial shipment of livestock from Wallowa County, assembled and shipped by the county agent. From this small beginning, these three livestock shipping associations are providing regular and orderly marketing service resulting in reduced marketing costs and increased returns for more than 2,000 livestock shippers in these respective counties. The 1937 gross business of these associations was as follows: Wallowa County Association, $647,000; Union County Association, $226,000; and Baker County Association, $203,000.

These associations were all organized by county agents, with the assistance of the extension specialists in marketing, and continue to be serviced by them.

Fruit and vegetable marketing

County agents of Clatsop, Deschutes, Klamath, Umatilla, and Union counties report assisting growers in the organization of new fruit and vegetable marketing associations, or in assisting groups of producers in finding market outlets.

Seed growers organized

Organized by the county agent in April, 1936, to meet a need in the marketing of small seeds, the Blue Mountain Seed Growers' Association increased in membership by 50 per cent this year, and there was a substantial increase in volume. Nearly 95,000 pounds of grass and clover seed were handled, bringing grower members more than $63,000.

Dairy and poultry marketing aided

Dairy marketing work consisted primarily of cooperation and service to established cooperative marketing associations, in the organization of which the Extension Service has assisted during the biennium.

A similar situation prevails in the matter of poultry and egg marketing. Organizations assisted in this connection include the Interstate Associated Creameries and affiliated members, the Pacific Cooperative Egg and Poultry Association, and the Oregon Turkey Growers Incorporated, and its various local units.
GENERAL AGRICULTURAL ECONOMICS

Outlook information aids in balancing production

Coordinate with the work in marketing is that activity which tends to bring about adjustment of production in accordance with effective market demand. To aid in effecting this adjustment on the basis of facts, timely information on trends and agricultural production, prices, supply and demand, is distributed monthly to a selected list of farm leaders in all counties in the state. A monthly publication called “Agricultural Situation and Outlook” is issued of which 29,492 copies were distributed to regular cooperators during the biennium. In addition, 89,972 copies were distributed in counties where there was special interest in particular commodity outlook reports.

Agricultural statistics

Information on outlook and price trends has been more extensively used and drawn upon by Oregon farmers during the past biennium than in any previous period. This effective information was provided by the extension specialist in agricultural economics. The material was constantly used in connection with 25 two-day county agricultural economic-outlook conferences held in 1936, and by the county program planning committees in two-day meetings in 36 counties during the spring of 1937.

A special project in collection and analysis of agricultural statistics was made possible through funds provided by Chapter 298, Oregon Laws 1937, enabling the appointment of an assistant economist. Information on volume and income from 100 different agricultural items produced, including vegetables, field seeds, fiber crops, oil crops, truck crops, small fruits, turkeys, furs, greenhouse products, and nursery stock will be obtained when the project is completed.

County economic planning

Readjustment of agricultural production in line with marketing possibilities, after studying analyses of facts in each county, had been made the basis of a set of procedures for each county after a series of county program-planning conferences held during the period from 1923 to 1926. The year 1936 marked the end of a 10-year cycle under the readjusted county programs. In that year the entire staff of county agri-
cultural agents and agricultural subject-matter specialists gave major attention to the holding of a second series of county program-planning and outlook conferences. In the various counties 210 committees of farm leaders functioned in connection with these conferences. To hear the reports of these committees, nearly 6,500, or 10 per cent, of the farmers of the state attended the sessions at which they were presented.

Third planning series organized

As a follow-up to this activity, and for the purpose of subjecting figures developed in 1936 by county-planning committees to the judgment and opinion of larger numbers, another series of county economic-outlook conferences was projected, to be held early in 1938. In connection with this series 180 committees were planned having a membership of more than 2,000 leaders.

RURAL SERVICE

The Extension Service has a full-time specialist in rural service. In addition, the home-economics extension program (page 43) includes other important elements of rural community service.

Rural service work during the biennium included the development of program material for rural organizations, such as the Grange, Farmers' Union, Farm Bureau, and community groups. Programs of work for the subordinate grange agricultural committees were developed at 29 county meetings of these committees.

Orchard soil-erosion prevention in Wasco County. Contour rills made in cultivated orchards at The Dalles prevent the rapid run-off of moisture.
in as many counties. Similar cooperation was extended to the Farmers’ Union, which has organizations in 10 counties. County agents provided 117 speakers for rural organizations; and participated in 636 meetings of rural organizations, at which some subject relating to agriculture was presented.

Work with older rural youth

In the rural areas of Oregon, there are approximately 75,000 young men and women between 16 and 25 years of age. In order to obtain definite facts upon economic and social problems surrounding this body of future citizens, the Extension Service, cooperating with the United States Department of Agriculture, carried on an extensive survey, interviewing more than 400 of these young people in 4 different counties. From this survey, it is evident that approximately 89 per cent of this group had not yet entered their chosen vocation. About 30 per cent were continuing in school. Most of them had passed beyond the age of direct contacts with 4-H Club work, and with agricultural instruction in high schools, but for the most part had not yet found places in adult groups. About 78 per cent of the youth out of school had no membership in organizations other than the church. Only 1 in every 10 of the out-of-school young people were definitely planning to return to school, but one-third desired or expressed hope to be able to continue their formal education.

With population upon the land increasing rapidly, serious economic and social problems face these young people. They
have indicated that obtaining additional education, developing more satisfactory personalities, and increasing opportunities for the right type of recreation and social life, are their main problems. An educational program through the Extension Service planned to meet these needs is distinctly within the field of the Land Grant colleges of the country. A group program sponsored by the Extension Service, utilizing the facilities of the entire State System of Higher Education, could to a great degree satisfy the needs expressed by these young people.

**Youth group aided**

Following the survey in 1936 to determine the interests and needs of this group, rural youth groups have been serviced in Tillamook, Union, Clackamas, Hood River, Baker, Klamath and Washington counties. Most active in this rural youth work is the group in Union County, where the county agent organized the “South 40” club, consisting of young men actively engaged in farming who were beyond the 4-H Club age. The aim of the club is to study agricultural problems, means of improving farming practices, and marketing procedures for farms which they are operating or helping to operate.

In this county, also, a group was brought together made up of farm girls between the ages of 17 and 30. Discussion subjects at planned meetings included instruction in personality development, common courtesies, glove making, simple entertaining, table decoration, and costume planning.

While this work has been somewhat of an experimental nature, the need is evident and it is clear that the county extension agent and extension specialists have the information...
and techniques properly to serve this group. The limited personnel and inadequate amount of time that can be taken from established projects for this work are the limiting factors.

Youth problems outlined*

The intensity of this problem needs to be strongly emphasized. Today farm lands of this country are still geared to a production far beyond the possibility of domestic consumption, even if distribution processes were greatly improved. Obviously, with great masses of our population undernourished, measured by conservative dietary standards, and also lacking adequate clothing, there is a challenging problem in the field of distribution of foods and fibers. But under current possibilities as to domestic consumption commercial agriculture is overburdened by an excess of man-power.

Approached from avenues of social considerations this excess man-power, not integrated in the economic and social scheme, makes the problem equally involved. Even commercial farming is largely a family enterprise. Now, with more families on the land than are required to meet the consumptive powers of the country, the situation becomes even more complex because economic conditions prevailing during the past eight years have caused a heavy migration from urban centers back to this land. Even though, from commercial standpoints, further production was unsound, this land did contribute to the subsistence of these displaced urban people and though, from all commercial standpoints, they were a retarding in-

* The paragraphs in this section are taken from an address by the writer presenting the views of the Oregon Extension Service before the section on Group Social Work at the National Conference on Social Work in Seattle in June, 1938.

Experimental fields on Moro Station have served as the basis of demonstrations of crop varieties and tillage practices that have completely changed dry-land farm practices in the Columbia Basin.
fluence upon the prosperity of agriculture, their individual position was, for the time at least, less acute than in the cities.

In addition to this migration from the urban centers, there was further increase in rural population, particularly of rural youth, because the recognized normal migration of people from the farms to the cities largely came to an end. Further, the rural birth rate, exceeding that of the cities, is continuing to accentuate this increase in rural population. Now there are more than a million more rural youth on the land than would have been the case had the usual number migrated to the cities during the past eight years. All of these factors combine to concentrate an overpopulation on the land in the country, judging from standards of reasonable commercial returns from this land, and perhaps even when the basis of consideration is partial subsistence rendered by the land as it absorbs stranded elements of society.

Is land in the future to continue in commercial use, or is it to be more and more utilized as an absorbent for surplus elements of the population, distressed at best, but perhaps least distressed where they can take advantage of the subsistence items furnished by a nominal acreage?

The imprint of this question is clearly implanted upon considerations with which rural youth are faced. Under current conditions the question to them is whether they face a temporary outlook resulting from an abnormal contraction of economic forces, or whether there has been for some eighteen years a long-time trend toward increasing rural poverty. During the days of expanding agriculture and industry, problems of these rural youth were met with relative simplicity. Some merely followed an expanding agriculture to new lands; some migrated to the cities; others remained on the home farms as successors in interest.

Face to face with increasing congestion on the land, an analysis of opportunities in agriculture for the farm boy, made by the United States Department of Agriculture, is of interest. Such analysis brings out that if young men now on the land are to develop a standard of living even slightly higher than that of their parents, two out of every four will become dependent upon occupations other than farming. One of the four will operate a small acreage on a subsistence-farm basis, giving part of his time to other occupations, and only one out of every four will be able to continue on a full-time farm operation basis. If productive industries in the cities can no longer
absorb the other two young men, as is at this particular time very definitely the case, a serious aspect of rural life is presented. If industry should again call for these reinforcements in man-power from the rural districts, then these young people face a question of who should be the ones to go. This raises the question: Is there, in our plans for improved social structure, provision for vocational guidance of the type that helps these young people to determine the spheres for which they are best fitted and so avoid after long years of trial and error, the misfortune and tragedy that so frequently develop?

HOME ECONOMICS

Broadening of home-economics service and evidence of general acceptance on the part of the people of the state of this service, as a means of improving standards of home and rural life, have been outstanding during the period of this report. The demand for home-economics extension teaching is beyond the financial ability of the Extension Service to meet. Evidence of this is found in the fact that, as compared with 6 in the previous biennium, there are now 11 county home demonstration agents, partly supported by county funds, bringing a broad service to the rural homes.

Objectives listed

The aim of the home-economics phase of the extension program is to help the farm family in obtaining and enjoying a richer home life and a better community life. To obtain this broad objective, assistance is made available for farm families: to safeguard and better the health of rural people; to assist them, especially the homemaker, in increasing the family income and in making the wisest possible use of available cash; to aid them in their social adjustments; to help them understand what is an adequate standard of living and to assist the family work toward that standard; to help women work out their home problems so that they have energy and leisure for their children and the cultural things of life; to help develop rural leadership so that farm people through their own efforts may be able to improve their conditions both financially and socially; and to evaluate and appreciate advantages and opportunities of living in the country.

The annual Home Interests Conference, devoted to all the problems relating to better family and home life, attained a new high point during the biennium when 721 homemakers in
24 counties attended the eighth annual conference in February, 1938. Conducted in cooperation with the School of Home Economics, this event is assuming increasing importance each year, as evidenced by state-wide interest and participation.

All counties reached

The home-economics phase of the Extension program reached every county in the state during the biennium. Progress was made in home demonstration work during the year in those counties serviced by women agents. In the 11 counties where home-economics work was advanced through home demonstration agents, increases were made in number of communities reached, extension units organized for project work, and study groups organized in the parent-education program. Help was given to the organization of older youth in cooperating counties. In 7 of these counties home demonstration agents were on a full-time basis, while in Washington, Yamhill, Coos, and Douglas counties, two home demonstration agents-at-large served.

In the second year of the biennium, 222 communities in 9 counties were reached through 128 organized adult groups. There was also an increase in the number of home visits, from 1,159 to 1,611. Home-economics extension work has advanced construction in home economics to women organized in home-economics extension units.

Project leaders trained

One of the outstanding pieces of work in the home-demonstration-agent counties is the development of project

Furniture Refinishing School conducted by specialists in home management assisted by home demonstration agent.
leaders in adult work. The first project-leader training meet-
ings were held in the fall of 1933, in two counties in connec-
tion with the clothing project. Last year there were 1,330
trained project leaders in the 7 counties working in all proj-
ects. These project leaders held 2,084 method-demonstration
meetings in their respective communities with an attendance
through the training of voluntary adult leaders who give in-
of 56,500, an increase of 235 and 905 in attendance over 1936.
A total of 4,050 meetings were attended by 121,437 people in
the home-demonstration-agent counties.

Projects developed

In the counties with full-time agents, the Home Eco-
nomics Extension Committee held monthly meetings with the
agent, developing and carrying out the program plans. Proj-
ects in clothing and textiles, foods and nutrition, home fur-
nishings and home management, and parent education were
developed in the extension units. In the counties of Clackamas,
Lane, Umatilla, and Jackson, the parent-education program
was not only developed in the Extension units, but also month-
ly meetings were held for the training of project leaders who
carried on study groups. The recreation project not only
was a major part of the program in the home-demonstration-agent
counties, but was carried on in 14 of the agricultural-agent
counties.

In the counties not maintaining home demonstration
agents, seven family living conferences were held during the
biennium by the State Leader and specialists. Demonstrations
on nutritional facts, governmental aid in clothing to consumer

Demonstrating matted-row planting of strawberries.
buyers, and family relationships were given. These conferences were county-wide days for both men and women. Some phase of the extension program was carried into every one of these counties.

Subprojects in the clothing-and-textiles project were developed by the specialist or agents-at-large in a series of 3 meetings each in demonstration centers selected by the county committee and the agricultural agent. Garment finishes, line and design in dress, remodeling, and economy buying were given in 12 counties in 31 demonstration centers.

The foods-and-nutrition project was conducted in every county through the 4-H health program. Subprojects developed in this field were: food preservation, menu planning and table service, vegetable cookery, salads, meat cookery, and nutritional facts. These subprojects were conducted in 11 counties not having home demonstration agents, and in 40 different communities.

Subprojects in the home-furnishings project on furniture arrangement, color in the home, and kitchen improvement were conducted in 6 counties with 18 different communities participating.

Some phase of the recreation project was conducted in 14 counties not having home demonstration agents. This included social-recreation institutes, dramatic institutes, homemakers vacation camps, and game equipment for home and community.

**Vacation camps**

The homemakers vacation camps, which proved popular during the previous biennium, were continued, giving the homemakers who otherwise might not have opportunity for a vacation the advantage of recreation, rest, and study. The number of camps held during this biennium was 24 as compared with 19 during the previous biennium, with 25 counties participating. During the biennium 2,101 attended camps, as compared with 1,128 the previous biennium.

**Accomplishments in clothing and textiles typical**

Results in the clothing-and-textiles project are typical of accomplishments of organized home-economics extension workers. Project leaders trained by the specialists and home demonstration agents in the second year of the biennium numbered 261. These voluntary leaders held 161 demonstrations
for 2,076 cooperators. In all, 322 method demonstrations in clothing and textiles were conducted, attended by 7,166. In the clothing program, 6,015 were enrolled as cooperators, carrying out some definite activity in clothing construction or taking training in clothing selection, renovation, or remodeling. In problems of clothing purchasing 695 families were helped, and 111 families were aided in budgeting clothing expenditures.

Parent education and child development, a new project

Organized work in parent education and child development was started during the biennium. In the short time remarkable progress has been made. Some of the objectives are: (1) To relieve personal maladjustment of adults and to help them become well adjusted individuals, so that (a) they may live together more happily and harmoniously, and (b) those who are parents may be better able to guide their children intelligently and skillfully. (2) To help parents to observe behavior, to recognize symptoms, to think through causes, and to work out solutions to the problems arising in the parent-child and child-child relationships. (3) To help parents acquire a knowledge of how growth and development progress, and of approximately what may be expected of children at different developmental stages, so that parents may provide an environment and a constructive program that encourages desirable behavior. (4) To help parents recognize those phases of their particular home atmosphere and family relationships that are good, as well as those which need improvement. (5) To make available to adults references on subjects related to child development, family relationships, parent education, and mental hygiene, and to encourage them to develop a scientific attitude toward and a critical evaluation of the varying opinions of different authorities. (6) To interest more men in a study of human relationships and to encourage more fathers to participate in the study and discussion of family living, to cooperate with mothers in the more important phases of child rearing and guidance, to realize the importance of harmony in parental control and guidance of children, and to recognize and accept the fact that daughters as well as sons need their fathers.

The subproject has been conducted (a) by demonstration-discussion meetings in extension units and P.T.A. groups; (b) through training of leaders who have conducted study clubs; and (c) by discussion evening meetings for parents. Fourteen counties participated in the project, with intense
work developed in 4 home-demonstration-agent counties. During the year 335 study club leaders conducted 69 study clubs. Each of these leaders attended 6 training meetings given in each of the 4 counties, and as a result, conducted 6 meetings in each of the 69 study clubs.

One of the interesting achievements in the project has been the participation and interest shown by men. During 1936-37 five evening meetings for parents were held in the counties of Lane, Clackamas, Umatilla, Jackson, and Columbia. Such discussions as "The Privileges of Being a Father" and "Are Parents Insecure?" not only have brought men to the meetings, but the men have taken an active part in the meetings. As a result of the interest shown in parents' meetings in 1937, 6 monthly evening meetings for parents will be given in each of the 4 demonstration counties during 1938.

Planning the programs

Home-economics extension programs, under the direction of home demonstration agents, carried on through home economics units and voluntary adult leaders, are developed each year in May at county program-planning days. In each county the program is a self-determined one, developed at program-planning meetings attended by representative women from each cooperating community.

Cooperation with relief and other Federal agencies

The home-economics staff of the Extension Service have cooperated with relief agencies, WPA and the Farm Security Administration in aiding their clients through demonstrational meetings, conferences, correspondence, and printed material. A total of 348,613 copies of either printed or mimeographed material on the various phases of homemaking have been distributed on request to relief committees, families desiring to cut living costs, and other families endeavoring to raise their standard of living. There are available for free distribution on request 282 different bulletins and circulars.

4-H CLUBS

4-H Club work continued to be an important part of the Extension Service program. In the past biennium the ratio of 4-H Club enrollment to the number of young people in the rural districts of the state was two and one-half times greater than in any other of the 11 western states. In the past two calendar years, 4-H
Club enrollment was 22,802 and 24,431 and the percentage of completion was 86.57 and 85.92, which was the third highest completion record in the western states region.

**Entire staff supports program**

A broadening interest on the part of all staff members in the junior programs has aided the general progress of 4-H Club work to a great degree. Extension agents, for instance, in the northeastern counties of the state, where no county club agents are employed, increased the participation in club work in that district by more than 15 per cent in 1937 by following directed plans. County agricultural agents, assistant county agents, and home demonstration agents are giving an increasing amount of time to junior work.

The purpose of 4-H Club work is to teach, through doing, better practices in agriculture and home economics; also to develop self-reliance, ambition, aggressiveness and sportsmanship; and above all, to develop through character the highest type of manhood and womanhood, and through leadership and community pride the best kind of American citizenship. Club work in Oregon is conducted by the Extension Service in agriculture and home economics as is the case in every state and territory of the United States.

Club work is keyed to develop a well-rounded boy and girl. The four H’s represent: training the head to clearer thinking; the heart to greater loyalty; the hands to larger service; and through health to better living.

**Broad program developed**

But in Oregon 4-H Club work carries its program even further. It is clearly recognized that not all of these thousands of boys and girls enrolled will become farmers or farm wives. Since the farm lands of the state return nearly three-fourths of the annual income from basic resources every year, it is regarded as fundamental educational procedure that these young people understand this vital relationship of the land to the state’s prosperity and know something of the economic and social factors surrounding land and farming in Oregon that influence its welfare. Good farming and pleasant homes are fundamental, but the fact that Oregon sells its products at distant points, and that maintenance and possible increase of agricultural income depend upon continuous readjustments in production, and improvement in marketing methods in order...
to meet competition in those distant markets, are stressed in
order that these young people may, as citizens, participate ef-
fectively in the state’s affairs in whatever walk of life they may
elect.

Club summer school

Several annual events, sponsored by the Extension Ser-
vice, gained in popularity during the biennium. Longest estab-
lished is the annual 4-H Club Summer School, which in the
1938 session broke all records for attendance with an enrol-
ment of 1,681 club members and 165 local leaders from 36
counties.

Supporting organizations

The following organizations are supporting the 4-H Club
Summer School phase of the Extension program and the 4-H
club program in general, by providing scholarships under vari-
ous terms, making possible attendance of deserving club mem-
bers:

Granges  County Fair Boards
Banks     Chambers of Commerce
State Fair American Legion Auxiliaries
Rotary Clubs Klamath Indian Agency
Kiwanis Clubs Business Men’s Clubs
Lions Clubs  Burns Booster Club
American Legion Business and Professional Clubs
Royal Rosarians Veterans of Foreign Wars
Farm Unions Sheridan Fire Department
Women’s Clubs Madras Men’s Luncheon Club
Community Clubs Marion County Health Association
Garden Clubs Farm Bureau Auxiliaries
Newspapers Various Merchants and Business
Ladies’ Aids Houses
Farm Bureaus Local Leaders’ Associations
Creameries

Local leaders

To strengthen participation in 4-H Club activity, county
associations of local leaders have been organized in 23 coun-
ties. A definitely recognized requirement in the advancement
of the 4-H Club program is the voluntary local leader. The lo-
cal leader is in charge of a 4-H Club of five or more members,
organized in a particular project. The local leader supervises the work of these younger people, helps in the planning of their program and their club activities, assists the officers in the conducting of their club meetings, visits the club members in their homes, giving supervision to the work of their club project, and attends meetings and conferences that are held for the training of these voluntary leaders.

**Local leaders’ conference**

In each year of the biennium, a three-day conference for local leaders was held on State College campus in January. A similar meeting for Eastern Oregon counties was held at the Union Experiment Station each year in early May. The time was devoted largely to subject-matter and round-table discussions. This was the fourth year for such a conference at Corvallis and the second at Union. At the request of the leaders, each of these conferences has been made an annual event.

**Moses Trophy**

Again in 1937 the Moses Trophy, generally regarded as the highest national award in 4-H club work in the United States, was awarded to an Oregon 4-H club member—Miss Helen Michaels, of Lane County. The first winner was Alex Cruickshank of Yamhill County, in 1927; then Edgar Grimes of Linn County in 1928; Lois Bailey of Lane County in 1929; and Clayton Fox of Union County in 1936. This is the fifth time in 11 years that an Oregon club member has been awarded this high national honor, a record not exceeded by any other state and equaled by only one.
Summary of Cooperative Work with Federal Action Agencies

Activities and accomplishments in connection with Agricultural Conservation (AAA), Soil Conservation, Farm Credit, Rural Electrification, Rural Rehabilitation, and Farm Tenancy and Relief Agencies, and other emergency work handled by the Extension Service during the fiscal year ending June 30, 1938.

Assistance to AAA under Soil Conservation and Domestic Allotment Act

Until July 1, 1937, the Vice Director of Extension, by request of the United States Department of Agriculture, assisted in the administration of the farm program under the AAA. County budgets for program operation in every county were approved and signed, and other administrative duties were carried out. Effective on July 1, however, instructions came from the AAA apparently with understanding and approval of the Extension Service of the United States Department of Agriculture, relieving the Extension Service administrators of all direct responsibility in connection with the farm programs. Full responsibility from that time was lodged in the Executive Secretary of the State Agricultural Conservation Program.
The arrangement prevailing up to July 1, 1937, was a very satisfactory one. Relationships had been most cordial. Under this plan, effective and economic service had been rendered to the farmers of the state and to the AAA. Since March of this year the Director of Extension has been a member of the State AAA committee, according to terms of the law establishing the current AAA program. Under this same law, the county agricultural agent is designated as an advisory member of the county committee, but does not vote.

Educational service

During the biennium, county agents have, in their educational capacity, presented as usual the terms of the AAA acts to farmers, and devoted considerable time to the service function in assisting interested farmers to comply with the terms of the acts. This is definitely in line with the educational function of the Extension Service. Any law affecting every farm in the United States must be known in all its implications to every educator in the field of agriculture. Its weak as well as its strong points should, on appropriate occasions, be pointed out. This has always been the policy in the Oregon Extension Service.

By this procedure, the county-agent staff, assisted by the assistant county agent leaders and extension specialists, was again an important factor in bringing to the farmers of Oregon substantial cash benefits accruing from compliance with the terms of this legislation.

Erosion of wheat land in Columbia Basin is a problem on which control measures are proving effective.
Payments to farmers substantial

Work sheets under the Agricultural Conservation Program were signed by 34,587 farmers in 36 counties in 1937, in comparison with 22,000 signed in 1936. Benefit payments received as a result of cooperation in the program in the 36 counties, amounted to $1,946,000 in 1936 and an estimated payment of $2,159,000 in 1937.

Practices sound

The soil-building practices established were in line with the teaching of the School of Agriculture, and the compliance on the part of the farmers, therefore, resulted in the adoption of considerable volume of practice for some time recommended by the State College. Evidences of the contribution of the program to conservation of agricultural soil is illustrated in the fact that while in 1932 there was practically no trashy-fallow practice on wheat farms in Eastern Oregon, in 1936 the acreage on which this practice was followed was 114,579 and in 1937, 241,333 acres, an increase of 110.6 per cent. Likewise, in connection with the use of ground limestone, necessary to the production of legumes on many acid soils in Western Oregon, cooperators in the program used 1,608 tons in 1936 and 16,955 tons in 1937.

Surplus removal

The extension specialist in marketing was active during the year in arrangements for, or attempts toward, the diversion of surplus potatoes, pears, hops, and apples through cooperation with the Federal representatives working on surplus removal and marketing agreements.

Soil conservation service

On November 13, 1936, arrangement was made with the Soil Conservation Service for the joint employment of an Extension Soil Conservationist. Professor Arthur King, Specialist in Soils, was transferred to this position, part of his project work being suspended for the time, and another part, specifically in connection with irrigation work in Western Oregon, being temporarily lodged among the functions of the specialist in agricultural engineering. In carrying on certain phases of the soil-conservation work, the county agent staff has had the
cooperation of the Soil Conservation Service. Ten erosion control demonstration farms were established in Eastern Oregon counties.

Farm Security Administration

Rural Rehabilitation work was done in all counties in cooperation with C. L. Smith, Assistant Regional Director and Head of Rural Rehabilitation work for Oregon. Relationships have been exceptionally satisfactory. In each county a committee of representative citizens advises on procedures with reference to the rural rehabilitation work. The county agents sit on these committees. It is very important that the staff of the Farm Security Administration recognize and use the same subject matter as the Extension Service. This is indeed the case; they look to the county agents as leaders. Following is a list of district offices in Oregon and the counties served from each:

**Farm Security Administration**

**District Offices and Counties Served in Oregon**

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<tr>
<th>Location</th>
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Farm Credit Administration

The Dean and Director of the School of Agriculture is Chairman of the Board of Directors of the Farm Credit Administration of Spokane. The specialists in economics and the county agents have been drawn upon heavily for technical advisory service particularly by managers of the production credit associations.